

IN THE CLAIMS

Claims 1-24. (Canceled)

Claims 25. (New) Fluid processing apparatus comprising: a vessel containing a hydrocyclone and defining an inlet chamber, the vessel having a vessel inlet arranged to feed fluid into the inlet chamber, and the inlet chamber being arranged to receive fluid from the vessel inlet and to pass the fluid to an inlet of the hydrocyclone, the inlet chamber including coalescing means mechanically supported by the vessel and arranged to coalesce relatively small droplets contained in fluid received at the vessel inlet into larger droplets before passing the fluid to the hydrocyclone inlet, the coalescing means having a substantially predetermined external shape which defines at least one elongate liner hole for receiving a respective hydrocyclone liner and which permits removal of the hydrocyclone liner without removing the coalescing means.

Claim 26. (New) Apparatus according to Claim 25, wherein the coalescing means is arranged to cause the fluid to pass through fibers of generally increasing respective cross-sectional areas as the fluid passes towards the hydrocyclone inlet.

Claim 27. (New) Apparatus according to Claim 25, wherein the coalescing means is arranged to cause the fluid to pass through fibers of predetermined varying wettability as the fluid passes towards the hydrocyclone inlet.

Claim 28. (New) Apparatus according to Claim 25, wherein the coalescing means is arranged to cause the fluid to pass through fibers and wherein the coalescing means is further arranged to cause the fluid to pass through regions in which the fiber density varies in a predetermined manner as the fluid passes towards the hydrocyclone inlet.

Claim 29. (New) Apparatus according to Claim 25, wherein the coalescing means includes a region of generally parallel fibers arranged, at least in use, to extend generally parallel to the direction of fluid flow.

Claim 30. (New) Apparatus according to Claim 29, wherein the parallel fibers are attached generally by one end only of the fibers.

Claim 31. (New) Apparatus according to Claim 29, wherein the fibers are attached at both ends.

Claim 32. (New) Apparatus according to Claim 25, wherein the inlet chamber includes an inlet arrangement which creates a plug flow regime at the inlet of the coalescing means.

Claim 33. (New) Apparatus according to Claim 25, wherein the vessel is generally elongate and the hydrocyclone inlet is positioned generally at a first end of the vessel, the inlet chamber containing an inlet arrangement having an inlet baffle which divides the inlet chamber into an inner region which contains the hydrocyclone and an outer region adjacent a interior surface of the vessel wall, the vessel inlet being arranged to feed fluid into the outer region and the inlet baffle including at least one baffle aperture located generally at a second, distal end of the vessel and arranged to permit fluid flow from the outer region to the inner region.

Claim 34. (New) Apparatus according to Claim 33, wherein the inner region further contains the coalescing means.

Claim 35. (New) Apparatus according to Claim 33, wherein the vessel inlet is arranged to feed fluid into the outer region at a position between the two ends of the vessel.

Claim 36. (New) Apparatus according to Claim 33, wherein the outer region extends along a shorter length of the vessel than the inner region.

Claim 37. (New) Apparatus according to Claim 33, wherein the inlet baffle is generally cylindrical.

Claim 38. (New) Apparatus according to Claim 37, wherein each baffle aperture is arranged to cause a generally inwardly radial flow of fluid into the inner region.

Claim 39. (New) Apparatus according to Claim 33, wherein the parallel fibers extend in the inner region from each baffle aperture towards the first end of the vessel.

Claim 40. (New) Apparatus according to Claim 25, wherein the coalescing means includes a mass of integrally-formed coalescing media defining a plurality of elongate holes for receiving at least one respective hydrocyclone liner.

Claim 41. (New) Apparatus according to Claim 25, wherein the fluid is an oil and water emulsion.

Claim 42. (New) Apparatus according to Claim 25, wherein the overflow outlet of the hydrocyclone is closed.

Claim 43. (New) Apparatus according to Claim 25, wherein the overflow and underflow outlets of the hydrocyclone are coupled together.

Claim 44. (New) Apparatus according to Claim 25, wherein the vessel contains a plurality of hydrocyclones.

Claim 45. (New) A method of manufacturing a fluid processing apparatus having a vessel containing a plurality of hydrocyclones and defining an inlet chamber, the vessel having a vessel inlet arranged to feed fluid into the inlet chamber, and the inlet chamber being arranged to receive fluid from the vessel inlet and to pass the fluid to the respective inlets of the hydrocyclones, comprising the step of: inserting a mass of coalescing media into the inlet chamber, the media having a substantially predetermined external shape defining at least one elongate liner hole for receiving each respective hydrocyclone liner, and arranging said coalescing media to coalesce relatively small droplets contained in fluid received at the vessel inlet into larger droplets before passing the fluid to each respective hydrocyclone inlet and subsequently inserting at least one hydrocyclone liner into a respective liner hole.

Claim 46. (New) A method of manufacturing according to Claim 45, additionally including the step of mechanically supporting said coalescing means by said vessel.

Claim 47. (New) A method according to Claim 45, including the step of locating an inlet arrangement in the inlet chamber, the inlet arrangement having an inlet baffle which divides the inlet chamber into an inner region which contains the hydrocyclones and an outer region adjacent an interior surface of a vessel wall, arranging the vessel inlet to feed fluid into the outer region and the inner region containing a mass of fibrous coalescing medium whose fibers are attached at one end of the vessel and

arranging said fibers so that they are, at least in use, generally parallel to the flow direction of fluid in the inner region.

Claim 48. (New) A method of manufacturing a fluid processing apparatus having a vessel containing a plurality of hydrocyclones and defining an inlet chamber, the vessel having a vessel inlet arranged to feed fluid into the inlet chamber, and the inlet chamber being arranged to receive fluid from the vessel inlet and to pass the fluid to respective inlets of the hydrocyclones, the inlet chamber including coalescing means arranged to coalesce relatively small droplets contained in fluid received at the vessel inlet into larger droplets before passing the fluid to the respective hydrocyclone inlets, comprising the steps of: locating an inlet arrangement in the inlet chamber, the inlet arrangement having an inlet baffle which divides the inlet chamber into an inner region which contains the hydrocyclones and an outer region adjacent the interior surface of the vessel wall, arranging the vessel inlet to feed fluid into the outer region and the inner region, wherein the coalescing means in said inner region contains a mass of fibrous coalescing medium whose fibers are attached at one end of the vessel and arranging said fibers so that they are, at least in use, generally parallel to the flow direction of fluid in the inner region.

Claim 49. (New) A method of manufacturing according to Claim 48, additionally including the step of mechanically supporting said coalescing means by said vessel.